

REMARKS

Claims 1, 2, 4-6, 9, 11, 14-17, and 19-22 are amended. Claim 27 is added. Supports for amended claims 2, 14, 17 and new claim 27 may be found, for example, in paragraph 36 of the Specification as filed, as well as in the claims as filed. Accordingly, no new matter is added. Claims 1-27 remain in the Application. Reconsideration of the pending claims is respectfully requested in view of the above amendment and the following remarks.

I. In the Specification

Applicants have amended the informalities identified by the Examiner in the specification. Specifically, on page 9 line 21, Applicants have replaced “This block” with “This module.” Approval of this amendment is respectfully requested.

II. Claim Objections

Claims 1-10 and 20-23 are objected to because of informalities. Specifically, the Examiner objects to the term “broadcasts” in Claim 1, “the said mapping” in Claim 2, and “a redirecting” in Claim 20 (supposedly, Claim 21). Applicants amend Claims 1, 2, and 21 to remove the objected terms. Approval of this amendment is respectfully requested.

III. Claims Rejected Under 35 U.S.C. § 112

Claims 1-10 and 19 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite. Specifically, Claim 1 is rejected for reciting actions that the Examiner regards as the same. Applicants amend Claim 1 to remove the actions of “transmitting” and “forwarding” the broadcast control cells.

In regard to Claim 19, Claim 19 is rejected because the statement “facilitating the said mapping locally” is considered vague. Applicants amend Claim 19 to remove the statement. Approval of this amendment is respectfully requested.

IV. Claims Rejected Under 35 U.S.C. § 102

Claims 20-23 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,879,559 issued to Blackmon (Blackmon). Applicants respectfully disagree with the rejection.

To anticipate a claim, the Examiner must show that a single reference teaches each of the elements of that claim. Among other elements, amended Claim 20 recites:

“A switching fabric port mapping system comprising:
a multi-shelf switching fabric;
source line cards, each associated with a plurality of line
ingress queues;
destination line cards; and
a broadcast control mechanism which updates logical to
physical port mappings, wherein packets in the line ingress queues
are to be forwarded by the switching fabric based on the updated
logical to physical mappings.” (Emphasis added).

Applicants submit that Blackmon as well as other cited references at least fails to teach the logical to physical port mappings as claimed.

The Examiner relies on Blackmon for teaching the logical mapping performed at the line card, in which the mapping is performed without physical elements. However, Blackmon at most discloses a logical mapping of line card addressing and identification at col. 3, lines 23. Logical mapping of line card is patentably different from logical to physical port mappings, because, as recognized by the Examiner, the logical mapping in Blackmon is performed without physical elements. A mapping without physical elements cannot teach a logical to physical port mapping, because a logical to physical port mapping requires physical elements as the destination of the mapping.

Blackmon is also cited for disclosing a system table update which is characterized as Applicants’ claimed broadcast control mechanism. However, the system table update does not carry logical to physical mapping information but merely informs the system of the available ports (col. 13, lines 37-38). There is nothing in Blackmon that teaches or suggests broadcasting logical to physical mappings.

Accordingly, reconsideration and withdrawal of the anticipation rejection of Claim 20 are requested.

In regard to Claims 21-23, these claims depend from Claim 20 and incorporate the limitations thereof. Thus, at least for the reasons mentioned above in regard to Claim 20, Blackmon does not anticipate these claims. Accordingly, reconsideration and withdrawal of the anticipation rejection of Claims 20-23 are respectfully requested.

V. Claims Rejected Under 35 U.S.C. § 103(a)

A. Claims 1-4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,879,559 issued to Blackmon (Blackmon) in view of U.S. Patent No. 6,385,200 issued to Erami (Erami). Applicants respectfully disagree with the rejection.

To establish a *prima facie* case of obviousness, the relied upon references must teach or suggest every limitation of the claim such that the invention as a whole would have been obvious at the time the invention was made to one skilled in the art. Among other elements, amended Claim 1 recites “wherein broadcast control cells include current logical to physical port mappings.” Blackmon does not teach or suggest broadcasting logical to physical port mappings.

The Examiner recognizes that Blackmon does not disclose broadcasting as in Applicants’ Claim 1 but relies on Erami. However, Erami at most discloses broadcasting of control cells to every destination in an ATM network for determining a route to deliver broadcast messages (col. 2, lines 16-19). The route determination as disclosed in Erami is totally unrelated to the mappings of logical to physical ports. Further, Applicants’ claimed line card interfaces, which are the destinations of the broadcast, are not Erami’s “destinations in an ATM network.” Rather, the line card interfaces are destinations within a switching fabric. A broadcast mechanism across a network is not the same, does not apply to, and does not suggest the broadcast within a node of a network.

Moreover, there is no motivation to combine Blackmon with Erami. Blackmon uses a line card protection technique within a network node. Erami discloses determining the route of broadcast messages for a plurality of network nodes in an ATM network. The two cited references are directed at two different network environments (within a node vs. across multiple nodes) for resolving two different technical problems (line card protection using redundancy vs. network traffic reduction). Thus, it is respectfully submitted that the proposed combination is purely hindsight reconstruction which would not have been made without viewing Applicants’ specification.

Further, even assuming for the sake of argument that Blackmon is to be combined with Erami, the combination would not produce the claimed method. Blackmon does not teach or suggest logical to physical port mappings as discussed above. Erami does not disclose broadcasting any cells that are related to logical or physical ports. The “determination of unique routes” as disclose in Erami does not involve any logical to physical mappings. Thus, the proposed combination is inapposite.

In regard to Claims 2-4, these claims depend from Claim 1 and incorporate the limitations thereof. Thus, at least for the reasons mentioned above in regard to Claim 1, Blackmon in view of Erami does not render these claims obvious. Accordingly, reconsideration and withdrawal of the rejection of Claims 1-4 are respectfully requested.

B. Claims 11, 14-15 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,879,559 issued to Blackmon (Blackmon) in view of U.S. Patent No. 5,765,032 issued to Valizadeh (Valizadeh).

Among other elements, amended Claim 11 recites “means for broadcasting logical to physical port mappings.” (Emphasis Added). Blackmon does not teach or suggest broadcasting logical to physical port mappings.

The Examiner relies on Valizadeh for disclosing the mapping of logical ports to ingress queues. However, Valizadeh does not cure the deficiency of Blackmon. Valizadeh does not disclose broadcasting any logical to physical port mapping. Valizadeh mentions that each physical port is time-multiplexed into multiple logical ports (col. 3, lines 50-55). Even assuming for the sake of argument that the time-multiplexing information is characterized as Applicants’ claimed logical to physical port mappings, the mappings are relevant only to one physical port. Valizadeh does not teach or suggest broadcasting the mappings or provide any reason why the mappings should be broadcast to other ports. Thus, the claimed “broadcasting the logical to physical port mappings” is not mentioned, suggested, or inherently required by Valizadeh.

Moreover, the cited passage in Valizadeh might refer to the mapping of ingress queues to virtual circuits (col. 1, lines 55-56). Applicants note that a virtual circuit is not a logical fabric port, but rather a data path connecting a source to a destination. A virtual circuit may at most be characterized as a logical circuit which might use several logical and physical ports to establish a connection. However, there is no one-to-one correspondence between a virtual circuit and a logical fabric port, as multiple virtual circuits may share the same logical port and the same virtual circuit may use several different logical ports. Thus, Valizadeh does not teach or suggest Applicants’ claimed associating ingress queues to logical fabric ports.

Analogous discussions apply to independent Claim 15. In regard to Claims 14 and 17, these claims respectively depend from Claims 11 and 15 and incorporate the limitations thereof. Thus, at least for the reasons mentioned above in regard to Claims 11 and 15, Blackmon in view of Valizadeh does not render these claims obvious. Accordingly, reconsideration and withdrawal of the rejection of Claims 11, 14-15 and 17 are respectfully requested.

C. Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,879,559 issued to Blackmon (Blackmon) in view of U.S. Patent No. 5,765,032 issued to Valizadeh (Valizadeh) in further view of U.S. Patent No. 6,385,200 issued to Erami (Erami).

Claim 18 recites “instances of multiple control cell broadcasts ongoing.” Claim 18 depends from Claim 15 and incorporates the limitations thereof. Thus, at least for the reasons mentioned above in regard to Claim 15, Blackmon in view of Valizadeh does not teach or suggest Claim 18. The Examiner relies on Erami for disclosing the continuous broadcasting of control cells in an ATM switching network. However, continuous broadcasting does not include, imply, or require “multiple ongoing broadcasts.” None of the cited references, including the cited passage of Erami (col. 2, lines 15-20), even remotely suggests multiple ongoing broadcasts. Accordingly, reconsideration and withdrawal of the rejection of Claim 18 are respectfully requested.

D. Claim 19 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,765,032 issued to Valizadeh (Valizadeh).

Claim 19 is amended to recite “associating line ingress queues to logical fabric ports; and broadcasting logical to physical port mappings, wherein the broadcasting contains the current logical to physical port mappings based on which packets in the line ingress queues are forwarded.” For at least the reasons mentioned above in regard to Claims 11 and 15, Valizadeh does not teach or suggest all of the elements.

Accordingly, reconsideration and withdrawal of the rejection of Claim 19 are respectfully requested.

VI. Allowable Subject Matter

Applicants amended allowable Claims 5, 6, 9, and 16 to supply antecedent basis for the elements in these claims.

Applicants appreciate the Examiner’s indication that Claims 5-10, 12-13 and 16 would be allowable if rewritten in independent form. Applicants respectfully submit that the amendment to their base Claims 1, 11, and 15 has obviated the need to rewrite these dependent claims. As Claims 1, 11, and 15 are in condition for allowance, their dependent claims are allowable at least for the reasons mentioned above. Accordingly, reconsideration and withdrawal of the objection of Claims 5-10, 12-13 and 16 are requested.

CONCLUSION

In view of the foregoing, it is believed that all claims now are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: March 20, 2006.


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Margaux Rodriguez

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